UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

October 31, 2001

Mr. Gregory Lorton
BRAC Operations, Code 06CA.GL/0892
Department of the Navy, Southwest Division
Naval Facilities Engineering Command
1230 Columbia Street, Suite 1100
San Diego, CA 92101

RE: Draft Work Plan for IR Site 28 Remedial Investigation, Alameda Point

Dear Mr. Lorton:

EPA has reviewed the above referenced document, prepared by Bechtel Environmental, Inc. and submitted by the Navy on August 28, 2001. In general, the work plan appears satisfactory. EPA's main concern is that the proposed sampling density for PAHs is too limited to be useful. This concern is expressed in General Comment #1. All other comments are relatively minor.

Please call me at (415) 744-2367 if you have any questions.

Sincerely,

Anna-Marie Cook

Anna-Marie Cook
Remedial Project Manager

cc: Michael McClelland, SWDiv
Andrew Dick, SWDiv
Daniel Murphy, DTSC
Dennis Mishek, RWQCB
Elizabeth Johnson, City of Alameda
Michael John Torrey, RAB Co-Chair
Karla Brasaemle, Tech Law Inc

EPA Review of the Draft Remedial Investigation Work Plan
IR Site 28, Todd Shipyards, Alameda Point

GENERAL COMMENT

1. **FSP Section 4.2, Soil Sampling, Table 4-1 and Figure 4-1:** EPA is concerned that the number of samples proposed for PAH analyses is too small. Five samples over a site that is more than 3 acres will not give a sufficiently dense coverage of samples to be statistically useful. EPA's toxicologist, Dr. Sophia Serda, proposes a sample density of 9 to 10 samples per acre for PAH sampling. Given the proximity of IR 28 to the Oakland Inner Harbor and former neighboring industrial activities in what is now Jack London Square, there is a concern that levels of PAHs may mirror those found in Estuary Park. A sufficiently dense sampling grid is necessary to determine whether the levels are similar to IR 25 or not, and taking only five samples in IR 28 is unlikely to definitively answer that concern. Please consider taking more PAH samples.

SPECIFIC COMMENTS

1. **WP Section 1.3, Purpose and Scope of the Remedial Investigation, Page 2:** EPA does not like the use of the term "acceptable risk range" because it implies that risk in the 10^{-6} to 10^{-4} range is "acceptable." EPA considers an excess cancer risk level of 10^{-6} as the point of departure for considering when to implement remedial measures at a site. Cancer risks above a risk level of 10^{-4} generally require remediation. The range between 10^{-6} and 10^{-4} is referred to as the "risk management range," and decisions regarding whether remedial action is warranted are made on a case by case basis after consideration of all factors, of which the risk assessment is only one component.

2. **WP Section 1.3, Purpose and Scope of the Remedial Investigation, Page 2 and Page 5:** Please consider that there may be a dermal and inhalation exposure pathway to groundwater for a construction worker (e.g. laying storm sewers or working on utilities) because the groundwater is shallow in IR 28 and on most of the base.

3. **FSP Section 2.4, Preliminary Extent of Contamination, Page A2-26:** The text states "only filtered groundwater results were used." It is unclear whether all samples were filtered, whether only metals samples were collected and analyzed, or if other samples were collected, but only filtered metals analytical results were used to assess the preliminary extent of contamination. Please list all of the analytical methods that were used and revise the text to clearly indicate all analyses that were used to assess the extent of contamination.

4. **FSP Section 4.2, Soil Sampling, Page A4-2:** The text states that PAH samples will be composites, but does not explain how compositing will be done. Please describe how compositing will be done, including a description of homogenization procedures.

5. **FSP Section 5.3, Land Survey, Page A5-2:** Please also specify that the elevation of the tide station stilling well will be surveyed.

6. **FSP Section 5.5, Monitoring Well Installation and Development, Page A5-4:** The text states that "a sample of the formation to be screened will be collected and analyzed for grain-size distribution." It is unclear if this analysis will be done in the field or in a laboratory, and if the latter, explain how the results will be obtained in time to select the screen slot size and filter pack material.

7. **FSP Section 5.5, Monitoring Well Installation and Development, Page A5-6:** The text describes how well development water will be handled, but does not specify how soil cuttings will be managed. Please specify.

8. **FSP Table 5-2:** Soil samples for density and moisture content analysis, grain-size distribution, liquid limits, and hydraulic conductivity analysis do not have to be cooled and there is no holding time for these analyses.

9. **FSP Section 5.13, Quality Control Samples, Page A5-16 and Table 5-3:** There is no provision for collection of field duplicate (or replicate) samples during soil sampling. Duplicate samples are a measure of sampling technique, laboratory performance, and possible inhomogeneities in the sample and should be collected for all media. Thorough homogenization can reduce heterogeneity of samples, if this is a concern. Please add field duplicate samples for soil sampling or explain why duplicate samples will not be collected.